

ABSTRACT

Rectangular protruding parts 2 are formed on the surface of one side of a quartz crystal substrate 1; these protruding parts 2 are formed as aggregates of rectangular protruding parts 4 of an even finer pattern. Recessed parts 5 which are lower than the surfaces of the protruding parts 4 are formed between the protruding parts 4; however, the width of these recessed parts 5 is narrow, so that when the protruding parts 4 are viewed on the macroscopic scale, numerous protruding parts 4 are aggregated, and appear to form single protruding parts 2. Such a quartz crystal substrate 1 is clamped between heater blocks from above and below, and the temperature of the quartz crystal substrate is elevated. At the point in time at which this temperature reaches a desired temperature, the substrate 1 is pressed by means of a press. Consequently, stress acts only on the portions corresponding to the protruding parts 4, so that the crystal axis components are inverted only in these portions. These portions with inverted crystal axes grow into the interior portion of the crystal, and are propagated into the interior portion of the crystal, so that the portions corresponding to the protruding parts 4 are connected, thus forming crystal axis inversion regions 6. As a result, crystal axis inversion regions with a desired shape can easily be formed.